# FUGITIVE DUST CONTROL PLAN

# **CCR UNITS**

Dominion Energy South Carolina Wateree Station 142 Wateree Station Road Eastover, SC 29044

December 19, 2019



# **REVISION HISTORY**

Revision Number	Revision Date	Section Revised <sup>1</sup>	Type of Revision <sup>2</sup>	Summary of Revisions <sup>3</sup>
1	12/19/19	All sections	Change in owner/operator	SCANA and SCE&G to Dominion Energy and DESC

#### Footnotes:

Notation refers to Section#-Paragraph#-Sentence#.
Only Technical Revisions will require updating of signatures.
Date of Plan revisions and updated Signatures are automatic and not included in Summary of Revisions.

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# LIST OF ACRONYMS

CCRCoal Combustion ResidualsCFRCode of Federal RegulationsDESCDominion Energy South CarolinaFGDFlue Gas Desulfurization

### BACKGROUND

The CCR Rule requires owners or operators of CCR facilities to adopt and document "measures that will effectively minimize CCR from becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities" (40 CFR 257.80). Existing CCR surface impoundments and existing CCR landfills must prepare a Dust Control Plan "no later than October 19, 2015, or by initial receipt of CCR in any CCR unit at the facility if the owner or operator becomes subject to this subpart after October 19, 2015" (40 CFR 257.80 (b)(5)).

The purpose of this CCR Fugitive Dust Control Plan is to identify and describe the Coal Combustion Residuals (CCR) fugitive dust control procedures used to reduce the potential for CCR becoming airborne at the Facility. The following sections provide background information on (1) coal combustion residuals and (2) regulatory requirements.

#### 1.1 <u>Coal Combustion Residuals</u>

CCR materials are produced at coal-fired power plants when coal is burned to produce electricity. CCR materials are managed by coal-fired power plant sites, including on-site storage, processing, and final disposal, typically in CCR landfills. Types of CCRs typically generated include fly ash, bottom ash, and flue gas desulfurization (FGD) materials. General characteristics of these CCR materials are described below.

- Fly Ash Fly ash is captured from exhaust (flue) gases by emissions control equipment including baghouses and electrostatic precipitators. Fly ash is characterized by clay-sized and silt-sized fine grain materials, consisting of silica, calcium, alumina, iron.
- **FGD Materials** FGD materials are produced by FGD emissions control systems, which are designed and operated to remove sulfur dioxide (SO<sub>2</sub>) from exhaust (flue) gases. FGD materials are generally produced as a cake. FGD materials can form a crust on surfaces, reducing potential for dust issues from FGD storage areas.
- **Bottom Ash** Bottom ash is characterized by sand-sized and gravel-sized materials, which settle by gravity to the bottom of a coal-fired furnace.

#### 1.2 <u>Regulatory Requirements</u>

This CCR Fugitive Dust Control Plan has been developed for the Dominion Energy South Carolina (DESC) Wateree Station in accordance with applicable regulations, as discussed below.

# 1.2.1 <u>CCR Rule Requirements</u>

The CCR Rule (40 Code of Federal Regulations [CFR] Part 257, Subpart D) requires preparation of a Dust Control Plan for facilities including CCR landfills, CCR surface impoundments, and any lateral expansion of a CCR unit. Selected definitions from the CCR Rule are provided below.

**CCR (coal combustion residuals)** means fly ash, bottom ash, boiler slag, and flue gas desulfurization materials generated from burning coal for the purpose of generating electricity by electric utilities and independent power producers.

**CCR fugitive dust** means solid airborne particulate matter that contains or is derived from CCR, emitted from any source other than a stack or chimney.

**CCR landfill** means an area of land or an excavation that receives CCR and which is not a surface impoundment, an underground injection well, a salt dome formation, a salt bed formation, an underground or surface coal mine, or a cave. For purposes of this subpart, a CCR landfill also includes sand and gravel pits and quarries that receive CCR, CCR piles, and any practice that does not meet the definition of a beneficial use of CCR.

**CCR surface impoundment** means a natural topographic depression, manmade excavation, or diked area, which is designed to hold an accumulation of CCR and liquids, and the unit treats, stores, or disposes of CCR.

**CCR unit** means any CCR landfill, CCR surface impoundment, or lateral expansion of a CCR unit, or a combination of more than one of these units, based on the context of the paragraph(s) in which it is used. This term includes both new and existing units, unless otherwise specified.

**Qualified person** means a person or persons trained to recognize specific appearances of structural weakness and other conditions which are disrupting or have the potential to disrupt the operation or safety of the CCR unit by visual observation and, if applicable, to monitor instrumentation.

#### Qualified professional engineer means an individual who is licensed by a state

as a Professional Engineer to practice one or more disciplines of engineering and who is qualified by education, technical knowledge and experience to make the specific technical certifications required under this subpart. Professional engineers making these certifications must be currently licensed in the state where the CCR unit(s) is located.

#### FACILITY INFORMATION

Name of Facility:	Wateree Station
Name of Operator:	Dominion Energy South Carolina (DESC)
<b>Operator Mailing</b>	Plant Manager
Address:	142 Wateree Station Road
	Eastover SC 29044
Name of Owner:	Dominion Energy South Carolina (DESC)
Owner Mailing	220 Operation Way
Address:	Cayce SC 29033
Location:	Richland County, SC

#### **Facility Description**

The Facility is a Coal Fired Electric Generation Plant. CCR derivative FGD letdown waters are managed for solids separation as required in onsite FGD ponds designated Forebay 1 and 2. These ponds alternate in operation to settle CCR FGD Solids and to de-cant water from the process into the waste water treatment system. These ponds are designated on the facility map as CCR surface impoundments.

These ponds when alternating in operation are removed from service and allowed to dry and residual sludge cake is recovered using dredging and excavation equipment and transported as a moisture containing material with no free liquid to an onsite permitted landfill.

Site roads are routinely managed to reclaim any residual CCR by vacuum equipment, shovels, and scraping as necessary. Water truck spraying of facility roads is conducted during operation as necessary. Trucks used to transport CCR are road transport trucks and trailers.

Fly ash which is reclaimed from the pollution control equipment is conveyed to an onsite ash pond or collected in silos for beneficial reuse. The CCR fly ash if destined for landfill placement is conditioned with river water as recovered from the onsite ash pond. Trucks used to transport CCR are both on road and off road trucks.

Bottom ash which is collected in a wet solids removal system is dewatered and loaded as moisture conditioned material into trucks when necessary. Trucks are covered prior to transport to the onsite landfill. Site roads are routinely managed to reclaim any residual CCR by vacuum equipment, shovels, and scraping as necessary. Water truck spraying of facility roads is conducted during operation as necessary.

Landfill transport and placement occurs during daylight hours during operation of the landfill. Material is trucked into the landfill site on paved roads to the operating cell. CCR placement is managed at the cell to consolidate active placement in a minimum footprint to allow traffic to be isolated to areas of placement and off of lifts of rolled CCR material. Coarser bottom ash is reserved in part and used for access routes along with water truck operation during operation. Temporary cover may be placed on inactive areas of the landfill cell as required.

A Title V permit required "Fugitive Dust Control Plan" is maintained for the balance of plant CCR management and equipment which are not CCR Units.

#### **DUST CONTROL PROCEDURES**

The following sections discuss dust control procedures for (1) CCR surface impoundment units, (2) CCR landfill units, and (4) facility roads. DESC Wateree Station has implemented these dust control procedures, which are applicable and appropriate for site conditions in accordance with 40 CFR 257.80(b)(1).

### 3.1 <u>CCR Surface Impoundment Units</u>

CCR FGD slurry is collected as a slurry/cake with high water content and the wetted CCR pond surface is present at a lower elevation than its surroundings (e.g., berms) and typically does not cause dusting. NPDES SC 0002038.

When the FGD slurry is dewatered and dredged it retains moisture but no free liquids and during dewatering and subsequent transportation for disposal it remains wetted with low potential for dusting.

Ash Pond CCR material is composed of both Fly Ash and Bottom Ash from plant operation. The Ash Pond is in closure with recovery of ponded ash in progress. The CCR material at areas of excavation is dewatered with no free liquids, as conditioned it is transported by truck to the onsite landfill.

# 3.2 <u>CCR Landfill</u>

CCR is transported as necessary from the generating facility CCR Units to DESC Wateree Station Landfill permitted as a Class III Landfill under SC Regulations R.61-107. "Solid Waste Management". The Landfill Permit number is LF 3-00026. CCR from the generating facility is conditioned wet when transported to the Landfill.

The following additional dust control procedures are implemented for the CCR Landfill.

- Placed material is pushed, spread, and compacted by equipment to maintain slope and grades to minimize erosion and dust.
- Water spray is applied from an onsite water spray tanker truck as necessary during ash placement.
- Travel routes over the active cell are wetted as necessary during operation as well as paved site access roads.
- Coarser bottom ash maybe reserved in part for surfacing routes within the cell areas as necessary to mitigate dusting.

• During high wind conditions, unloading operations at the working face may be halted, and additional dust suppression measures will be implemented.

When active CCR operations are completed in a given area, as well as prior to any long-term inactivity in a given area, the areas are contoured as needed to reduce the slopes of any exposed CCR. Segregated material such as soil or FGD material are used as slope cover or as necessary to manage exposed CCR as the cell filling progresses. Temporary cover is placed as necessary over temporarily inactive areas.

### 3.3 <u>Facility Roads</u>

The following dust control procedures are implemented for roads used for CCR management activities at the Facility, and being traveled by equipment employed in CCR management activities.

- Reduced vehicle speeds over active landfill cells are observed to reduce dust mobilization. During high wind conditions, operations and related traffic may be reduced or halted.
- During transportation CCR is conditioned by containing adequate moisture to minimize dust potential.
- Paved and unpaved roads used for transport to the CCR Unit are sprayed routinely by water trucks during daily operation.
- Paved roads at the Generating Facility maybe cleaned by a sweeper/vacuum truck as necessary.

#### TRAINING

Training sessions will be conducted as necessary to update employees on changes in the regulations, laws, or in-house procedures related to CCR management, including dust control procedures. Training records will be maintained at the Facility for five years. Sign-in sheets and topics of discussion at each briefing are maintained for documentation.

#### **RECORDKEEPING AND REPORTING**

The following sections provide details regarding: (1) CCR Fugitive Dust Control Plan preparation, (2) community involvement, (3) annual reporting, and (4) CCR Fugitive Dust Control Plan assessment and update process.

#### 5.1 <u>CCR Fugitive Dust Control Plan Preparation</u>

Existing CCR surface impoundments and existing CCR landfills must prepare a CCR Fugitive Dust Control Plan "no later than October 19, 2015, or by initial receipt of CCR in any CCR unit at the facility if the owner or operator becomes subject to this subpart after October 19, 2015" as required by 40 CFR 257.80 (b)(5).

A complete, updated copy of this Plan is maintained in the Facility operating record and on the Dominion Energy publicly accessible internet site in accordance with 40 CFR 257.80(a), 257.105(g), and 257.107(g). SCDHEC is notified when this Plan, or any subsequent amended version, is placed in the Facility operating record and on the Dominion Energy internet site, in accordance with 40 CFR 257.106(g).

#### 5.2 <u>Community Involvement</u>

DESC Wateree Station through its parent corporation Dominion Energy has implemented procedures for community involvement, including "logging inquiry involving CCR fugitive dust management at the facility," as required by 40 CFR 257.80 (b)(3). The Dominion Energy publicly accessible internet site provides contact information for the public to contact DESC with questions regarding dust management at CCR Units managed by the Company. DESC Customer Service will log and transfer inquiries to corporate staff that will coordinate response actions. Documentation of inquiry, response, and any derivative actions will be recorded and included in the annual Dust Control Report.

#### 5.3 <u>Annual Reporting</u>

DESC Wateree Station prepares annual dust control reports in accordance with 40 CFR 257.80(c) to document the following information:

- Description of dust control procedures implemented at the following CCR Units:
  - FGD Ponds "Forebay 1 and 2" (NPDES SC 0002038)
  - Ash Pond 1 (NPDES SC 0002038)
  - Class III Landfill (LF 3-00026)

- Summary of any concerns raised by stakeholders
- Description of any corrective actions taken

The first Annual Dust Control Report will be completed on or before 14 months after the October 19, 2015 initial placement of the Plan in the Facilities Operating Record. Each Annual Dust Control Report is completed and placed in the Facility operating record and on the Dominion Energy internet site, as required by 40 CFR 257.80(c), 257.105(g), and 257.107(g), within the specified timeframes. SCDHEC is notified when each Annual Dust Control Report has been placed in the Facility operating record and on the Dominion Energy internet site, in accordance with 40 CFR 257.106(g).

#### 5.4 CCR Fugitive Dust Control Plan Assessment and Update Process

DESC Wateree Station will periodically assesses the effectiveness of this Plan in accordance with 40 CFR 257.80(b). The Plan is reviewed at least once every five years from the date of the last review for adherence to the requirements of 40 CFR 257. If more effective prevention and control technology has been field-proven at the time of the review and will significantly improve dust controls, the Plan will be amended to reflect changes. The amended Plan will be implemented within six months of its completion. The designated person accountable for dust control at the Facility is responsible for documenting completion of each five-year review, signing a statement as to whether the Plan is amended. Technical changes made to this Plan will be certified by a qualified Professional Engineer as required by 40 CFR 257.80(b).

DESC Wateree Station will also amend this Plan in accordance with 40 CFR 257.80(b) whenever there is a change in conditions that would substantially affect the written Plan in effect, such as the construction and operation of a new CCR unit. The amended Plan will be implemented before or concurrently with the initial receipt of CCR into any new CCR unit(s). Technical changes made to this Plan will be certified by a qualified Professional Engineer as required by 40 CFR 257.80(b).

SCDHEC will be notified in accordance with 40 CFR 257.106(g) when this Plan has been amended and placed in the Facility operating record and on the Dominion Energy internet site.

#### **FACILITY APPROVAL**

This statement is the written commitment of the DESC Wateree Station management to provide the resources required to effectively minimize the potential for CCR becoming airborne at the facility, including CCR fugitive dust originating from CCR units, roads, and other CCR management and material handling activities. This CCR Fugitive Dust Control Plan will be fully implemented as herein described, and the Plan will be maintained in the Facility's operating record and on the Dominion Energy publicly accessible internet site.

RJSTD Richard J. Salley, IV

Name:

Title: Plant Manager, DESC Wateree Station

 $\frac{/-9-20}{\text{Date}}$ 

Date of full implementation:  $-\frac{1-9-20}{20}$ Management Initials: \_\_\_\_\_\_\_\_

#### **ENGINEERING CERTIFICATION**

Pursuant to 40 CFR 257.80 and by means of this certification, I attest that:

- I am familiar with the requirements of the CCR Rule (40 CFR 257); (i)
- I, or my agent, have visited and examined the DESC Wateree Station; (ii)
- (iii) The CCR Fugitive Dust Control Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards, and with the requirements of the CCR Rule; and
- (iv) The CCR Fugitive Dust Control Plan meets the requirements of 40 CFR 257.80

CLARK M- ARCINER Printed Name of Qualified Professional Engineer



Signature of Qualified Professional Engineer

Registration/License No. 23104 State: <u>SC</u>